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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/546,833	04/11/2000	Brian Mitchell Bass	RAL9-00-042	4516

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EXAMINER	
LY, ANH VU H	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/546,833	BASS ET AL.	
	Examiner	Art Unit	
	Anh-Vu H Ly	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4,7 and 10* is/are allowed.

6)☒ Claim(s) *1-3,5,6,8,9 and 11-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The declaration under 37 CFR 1.132 filed March 17, 2005 is insufficient to overcome the rejection of claims 1-3, 5-6, 8-9, 11-24 based upon 35 U.S.C. 102 as set forth in the last Office action because: It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

Withdrawal of Finality

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

3. Claims 3, 6, 8, 10, 12, and 13 are objected to because of the following informalities:

With respect to claims 3 and 6, in line 8, "said data" lacks antecedent basis.

With respect to claim 8, in line 1, "In a network switch" should be changed to - -A network switch- - since the preamble of dependent claims 9, 11, and 12 recite the network switch according to claim 8; in line 3, "said frame" lacks antecedent basis; in line 6, "said received frame" lacks antecedent basis; and in line 9, "said processor" lacks clear antecedent basis. It is unclear what processor being referred to, e.g., ingress processor or egress processor.

With respect to claim 10, in line 3, "said frame" lacks antecedent basis.

With respect to claim 12, in lines 1-2, "said frame header data" lacks antecedent basis.

With respect to claim 13, in line 5, "said received frame parameters" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-3, 5-6, 8-9, 11-12, 19, and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Calvignac et al (US Patent No. 6,775,284 B1). Hereinafter, referred to as Calvignac.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claims 1, 3, 6, 8, 19, 21-22, and 24, Calvignac discloses in Fig. 1, a block diagram for an interface device includes embedded processor complex 12 (ingress and egress processors) of a switching system and further includes port interfaces 14 and 36 for receiving (receiving incoming frames from a port of a network) and transmitting data frames (having a port through which the received frames are delivered) over ENET PHY 38. Calvignac discloses (col. 7, lines 22-30 and Fig. 2) that in association with the plurality of processing units 110 is instruction storage 122 where a plurality of different instructions sets are stored for retrieval and execution by the individual processing units 110 (picocode instructions stored in egress processor). The starting instruction in the instruction storage 122 is addressed in accordance with an address which is based on the type of message, its protocol and encapsulation (forming at ingress processor a header for each frame destined for egress processor, wherein header having code for identifying a beginning address of picocode instructions), as determined by the hardware classifier assist 118 (decoding code in header in a hardware frame classifier into a starting address in said picocode for egress processor). Calvignac discloses in Fig. 4, the hardware classifier 118 includes tables such as ETYPE compare, SDAP compare, and Code Entry Points tables (wherein decoding code includes indexing an address table in hardware frame classifier) and wherein, the processor 110 executes instructions stored in instruction memory 122 according to control lines 270, 272, and 276 (executing processing from a starting address space identified by table of hardware classifier).

With respect to claims 2, 5, 11, and 22-24, Calvignac discloses (col. 7, line 63 – col. 8, line 1) that the source address SA can indicate either that the message is an individual message,

destined for a single network address on one node on the network or that it is a multicast or a broadcast message. A multicast message is directed to a group of nodes on the network and a broadcast is directed to all stations (wherein frame header includes control information for egress processor which distinguish frames as being multicast or unicast).

With respect to claim 9, Calvignac discloses in Fig. 4, the hardware classifier 118 includes tables such as ETYPE compare, SDAP compare, and Code Entry Points tables (hardware frame classifier includes an address table which decodes frame header extension values and variable frame extension values which pint to egress processor starting address location).

With respect to claim 12, Calvignac discloses in Fig. 3I, the control information is stored in the header and wherein a field indicates the length of the header (wherein frame header data is stored in fixed length fields which have a length determined by a length field in the header).

5. Claims 1-2, 5-6, 8, and 11-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Gallo et al (US Patent No. 6,760,776 B1). Hereinafter, referred to as Gallo.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claims 1, 6, 8, 13, 16-17, 19-20, 22, and 24, Gallo discloses in Fig. 2, a simplified block diagram depicting network processors 25 of a switching system (Fig. 1) (a network switching system) having port 28 (an ingress processor for receiving incoming frames from a port of a network) for receiving frames of data from other networks and port 29 (an egress processor having a port through which frames are delivered) for delivering frames of data to other networks. Gallo discloses (col. 3, lines 29-32 and Fig. 3) that an instruction memory 47 (picocode instructions stored in egress processor) coupled to the core processing unit 46 for storing the picocode that drives the TSE 45. Gallo discloses in Fig. 5, a modified frame includes a plurality of fields containing instructions on a specific frame (header having code for identifying a beginning address of picocode instructions). Gallo discloses in Fig. 3, a hardware classifier 48 decodes the modified packet format (Fig. 5) for detecting the starting address (decoding said code in said header in a hardware frame classifier into a starting address in picocode for egress processor).

With respect to claims 2, 18, and 22-23, Gallo discloses (col. 4, lines 47-48 and Fig. 5) that the frame type info 82 indicates whether the frame is multicast or unicast and provides the appropriate identifiers (wherein frame header includes control information for egress processor which distinguish frames being multicast or unicast).

With respect to claims 5 and 24, Gallo discloses (col. 4, lines 47-48 and Fig. 5) that the frame type info 82 indicates whether the frame is multicast or unicast and provides the appropriate identifiers. This implies that if the frame is a multicast frame, then multiple copies are made for delivering to multiple output ports (egress processor creates multiple frames for multiple output ports when frame header contains multicast data).

With respect to claim 11, Gallo discloses (col. 4, lines 47-48 and Fig. 5) that the frame type info 82 indicates whether the frame is multicast or unicast and provides the appropriate identifiers (wherein frame header includes a field to identify received frame as being a multicast frame).

With respect to claim 12, Gallo discloses in Fig. 5, a modified frame having fixed and addressed length fields (frame header data is stored in fixed length fields which have a length determined by a length field in the header).

With respect to claim 14, Gallo discloses (col. 4, lines 48-50) that call point 83 indicates the application entry for processing the particular frame, including an associated NP (ingress processor encodes in header data representing a level of processing completed by ingress processor).

With respect to claims 15 and 21, Gallo discloses in Fig. 5, a modified frame having plurality of heading fields to specify the layer type and other information needed to properly

route the frame (ingress processor creates multiple fields in the header for indicating the type of frame received and for indicating the level of processing completed by the ingress processor).

Allowable Subject Matter

6. Claims 4, 7, and 10 are allowed.

Response to Arguments

7. Applicant's arguments filed March 17, 2005 have been fully considered but they are not persuasive.

Applicant argues on page 12 that Calvignac does not disclose forming at the ingress processor a header for each frame destined for the egress processor wherein the header having code for identifying a beginning address of picocode instructions stored in the egress process. Examiner respectfully disagrees. Calvignac discloses (col. 7, lines 22-30 and Fig. 2) that in association with the plurality of processing units 110 is instruction storage 122 where a plurality of different instructions sets are stored for retrieval and execution by the individual processing units 110 (picocode instructions stored in egress processor). The starting instruction in the instruction storage 122 is addressed in accordance with an address which is based on the type of message, its protocol and encapsulation (forming at ingress processor a header for each frame destined for egress processor, wherein header having code for identifying a beginning address of picocode instructions), as determined by the hardware classifier assist 118 (decoding code in header in a hardware frame classifier into a starting address in said picocode for egress processor).

Applicant argues on page 13 that Calvignac does not disclose partially processing a receive frame in an ingress processor and completing processing of frame in an egress processor.

Examiner agrees. Therefore, claims 13-18 rejections are withdrawn from Calvignac. However, claims 13-18 are still rejected by Gallo.

Applicant further argues on page 13 that Calvignac fails to disclose the ingress processor forming a header that is appended to receive frame and forward to egress processor; wherein the header having the effect of expediting the processing of frames in that the egress processor does not have to re-do or re-process the processing that has already been done by the ingress processor, as specified in independent claim 24. Examiner respectfully disagrees. Independent claim 24 does not recite wherein the header having the effect of expediting the processing of frames in that the egress processor does not have to re-do or re-process the processing that has already been done by the ingress processor.

Applicant argues on page 14 that in applicant's opinion Gallo et al reference appears to be less relevant to the claims than Calvignac et al. Therefore, applicant does not argue what claimed limitations are not taught or taught by Gallo. However, since the claims rejected by Gallo, examiner expects the applicant to point out what not being taught by Gallo. Furthermore, applicant submitted a declaration under 37 CFR 1.132. However, it is insufficient to overcome the rejection of claims 1-3, 5-6, 8-9, 11-24 based upon 35 U.S.C. 102 for the reasons set forth above.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl

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